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EXAMINER

QUINONES, ISMAEL C

ART UNIT PAPER NUMBER

2686

DATE MAILED: 07/29/2004

*[Handwritten mark]*

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/026,544

Applicant(s)

YOKOYAMA, NAOKI

Examiner

Ismael Quiñones

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on December 27, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1, 11 and 12** are rejected under 35 U.S.C. 102(e) as being anticipated by Vialén et al. (U.S Pat. No. 6,606,310).

Regarding **claim 1**, Vialén et al. disclose a subscriber wireless access system equipped with customer stations wirelessly connected to base stations (Mobile stations communicating in wireless fashion to the base stations; *col. 5, lines 9-11; Fig. 1*) and accommodating communication terminal devices in the customer stations (Accommodating communication terminal devices (network elements) such as base stations, ATM terminal devices, mobile telephone exchange in the mobile stations; *col. 5, lines 23-26 and 53-60; Fig. 1*), the subscriber wireless access system comprising: at least one exchange for connecting the base stations with a virtual dedicated line network for

enabling customer stations wirelessly connected to different base stations to be interconnected via a virtual dedicated line network (An ATM switch which enable permanent virtual connections therefore outlining a permanent virtual connection network, subsequently setting up permanent virtual connections between the mobile stations and the network elements; *col. 6, lines 1-34*), the exchange including a table correlating identification information assigned to the customer stations with virtual dedicated line network connection information allocated for connecting the customer stations (Wherein a management information base includes virtual path connection information, virtual channel connection, and address related the permanent virtual connections established for a mobile station call-set up establishment (VPI/VCI values); *col. 6, lines 50-58; col. 7, line 12 thru col. 8, line 16; Fig. 2; Fig.4*); means responsive to receipt of data from a customer station via a subordinate base station for, with reference to the table, sending the data through the virtual dedicated line network to another base station (Receiving data from a mobile station via a serving base station, subsequently forwarding the data to the network through a permanent virtual connection in accordance with an address value corresponding to a new base station and associated with a VPI/VCI value, thus sending the data to the new base station; *col. 6, lines 1-29; col. 9, line 10 thru col. 10, line 55*); and means responsive to receipt of data through the virtual dedicated line network for, with reference to the table, converting the data to customer station identification information of a customer station and sending the data to a subordinate base station (A mobile station or ATM terminal identification information such as a

VPI/VCI value, and an address, conveyed to a base station in a mobile station call-set up; *col. 7, line 12 thru col. 18, line 16*).

Regarding **claim 11**, Vialén et al. disclose an exchange for connecting base stations to a virtual dedicated line network to enable customer stations wirelessly connected with different base stations (Mobile stations communicating in wireless fashion to the base stations; *col. 5, lines 9-11; Fig. 1*) to be interconnected via the virtual dedicated line network (An ATM switch or exchange which enable permanent virtual connections therefore outlining a permanent virtual connection network, subsequently setting up permanent virtual connections between the mobile stations and the network elements; *col. 6, lines 1-34*), the exchange comprising: a table correlating identification information assigned to the customer stations with virtual dedicated line network connection information allocated for connecting the customer stations (Wherein a management information base includes virtual path connection information, virtual channel connection, and address related the permanent virtual connections established for a mobile station call-set up establishment (VPI/VCI values); *col. 6, lines 50-58; col. 7, line 12 thru col. 8, line 16; Fig. 2; Fig. 4*); means for, with reference to the table, sending data received from a customer station via a subordinate base station through the virtual dedicated line network to another base station (Receiving data from a mobile station via a serving base station, subsequently forwarding the data to the network through a permanent virtual connection in accordance with an address value corresponding to a new base station and associated with a VPI/VCI value, thus sending the data to the new base station; *col. 6, lines 1-29; col. 9, line 10 thru col. 10, line 55*); and means for, with

reference to the table, converting data received through the virtual dedicated line network to customer station identification information and sending the data to a subordinate base station (A mobile station or ATM terminal identification information such as a VPI/VCI value, and an address, conveyed to a base station in a mobile station call-set up; *col. 7, line 12 thru col. 18, line 16*).

Regarding **claim 12**, Vialén et al. disclose a base station capable of connecting to a virtual dedicated line network for enabling customer stations wirelessly connected with different base stations (Mobile stations communicating in wireless fashion to the base stations; *col. 5, lines 9-11; Fig. 1*) to be interconnected via the virtual dedicated line network (Base Stations coupled to at least one ATM switch or exchange which enable permanent virtual connections therefore outlining a permanent virtual connection network, subsequently setting up permanent virtual connections between the mobile stations and the network elements; *col. 6, lines 1-34*), the base station comprising: a table correlating identification information assigned to the customer stations with virtual dedicated line network connection information allocated for connecting the customer stations (Wherein a management information base includes virtual path connection information, virtual channel connection, and address related the permanent virtual connections established for a mobile station call-set up establishment (VPI/VCI values); *col. 6, lines 50-58; col. 7, line 12 thru col. 8, line 16; Fig. 2; Fig.4*); means for, with reference to the table, sending data received from a customer station via a subordinate base station through the virtual dedicated line network to another base station (Receiving data from a mobile station via a serving base station, subsequently forwarding the data to

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the network through a permanent virtual connection in accordance with an address value corresponding to a new base station and associated with a VPI/VCI value, thus sending the data to the new base station; *col. 6, lines 1-29; col. 9, line 10 thru col. 10, line 55*); and means for, with reference to the table, converting data received through the virtual dedicated line network to customer station identification information and sending the data to a subordinate base station (A mobile station or ATM terminal identification information such as a VPI/VCI value, and an address, conveyed to a base station in a mobile station call-set up; *col. 7, line 12 thru col. 18, line 16*).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Vialén et al. (U.S. Pat. No. 6,606,310) in view of Lundh et al. (U.S. Pat. No. 6,373,384).

Regarding **claim 2**, Vialén et al. disclose a subscriber wireless access system equipped with customer stations wirelessly connected to base stations (Mobile stations communicating in wireless fashion to the base stations; *col. 5, lines 9-11; Fig. 1*) and accommodating communication terminal devices in the customer stations (Accommodating communication terminal devices (network elements) such as base stations, ATM terminal devices, mobile telephone exchange in the mobile stations; *col. 5, lines 23-26 and 53-60; Fig. 1*), the subscriber wireless access system comprising: exchanges for connecting the base stations with a virtual dedicated line network for enabling customer stations wirelessly connected to different base stations to be interconnected via a virtual dedicated line network (A plurality of ATM switches which enable permanent virtual connections therefore outlining a permanent virtual connection network, subsequently setting up permanent virtual connections between the mobile stations and the network elements; *col. 6, lines 1-34*), each exchange including a table correlating identification information assigned to the customer stations with virtual dedicated line network connection information allocated for connecting the customer stations (Wherein a management information base includes virtual path connection information, virtual channel connection, and address related the permanent virtual connections established for a mobile station call-set up establishment (VPI/VCI values); *col. 6, lines 50-58; col. 7, line 12 thru col. 8, line 16; Fig. 2; Fig. 4*); means responsive to receipt of data from a customer station via a subordinate base station for, with reference



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to the table, sending the data through the virtual dedicated line network to another base station (Receiving data from a mobile station via a serving base station, subsequently forwarding the data to the network through a permanent virtual connection in accordance with an address value corresponding to a new base station and associated with a VPI/VCI value, thus sending the data to the new base station; *col. 6, lines 1-29; col. 9, line 10 thru col. 10, line 55*); and means responsive to receipt of data through the virtual dedicated line network for, with reference to the table, converting the data to customer station identification information of a customer station and sending the data to a subordinate base station (A mobile station or ATM terminal identification information such as a VPI/VCI value, and an address, conveyed to a base station in a mobile station call-set up; *col. 7, line 12 thru col. 18, line 16*), the tables of the exchanges containing identical virtual dedicated line network connection information for the customer stations connected through the virtual dedicated line network (Wherein a management information base includes virtual path connection information, virtual channel connection, and address related the permanent virtual connections established for a mobile station call-set up establishment (VPI/VCI values); *col. 6, lines 50-58; col. 7, line 12 thru col. 8, line 16; Fig. 2; Fig.4*). Vialén et al. fail to clearly specify an exchange being provided in every base station.

In the same field of endeavor, Lundh et al. disclose a cellular telecommunications network wherein an exchange being provided in every base station (Each base station comprising an ATM switch or exchange; *col. 6, line 34-36; Fig. 1, item 72*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Vialén et al. system to include an exchange or ATM switch in every base station as taught by Lundh et al. for the purpose of containing relevant frame information in every base station without relaying in a upper or master unit to convey the information to every base station.

7. **Claims 3 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Vialén et al. (U.S Pat. No. 6,606,310) in view of Kumaki et al. (U.S Pat. No. 6,473,411).

Regarding **claim 3**, Vialén et al. disclose a subscriber wireless access system equipped with customer stations wirelessly connected to base stations (Mobile stations communicating in wireless fashion to the base stations; *col. 5, lines 9-11; Fig. 1*) and accommodating communication terminal devices in the customer stations (Accommodating communication terminal devices (network elements) such as base stations, ATM terminal devices, mobile telephone exchange in the mobile stations; *col. 5, lines 23-26 and 53-60; Fig. 1*), the subscriber wireless access system comprising: at least one exchange for connecting the base stations with a virtual dedicated line network for enabling customer stations wirelessly connected to different base stations to be interconnected via a virtual dedicated line network (An ATM switch which enable permanent virtual connections therefore outlining a permanent virtual connection network, subsequently setting up permanent virtual connections between the mobile stations and the network elements; *col. 6, lines 1-34*), the exchange including a table correlating identification information assigned to the customer stations with virtual

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dedicated line network connection information allocated for connecting the customer stations (Wherein a management information base includes virtual path connection information, virtual channel connection, and address related the permanent virtual connections established for a mobile station call-set up establishment (VPI/VCI values); *col. 6, lines 50-58; col. 7, line 12 thru col. 8, line 16; Fig. 2; Fig.4*); means responsive to receipt of data from a customer station via a subordinate base station for, with reference to the table, sending the data through the virtual dedicated line network to another base station (Receiving data from a mobile station via a serving base station, subsequently forwarding the data to the network through a permanent virtual connection in accordance with an address value corresponding to a new base station and associated with a VPI/VCI value, thus sending the data to the new base station; *col. 6, lines 1-29; col. 9, line 10 thru col. 10, line 55*); and means responsive to receipt of data through the virtual dedicated line network for, with reference to the table, converting the data to customer station identification information of a customer station and sending the data to a subordinate base station (A mobile station or ATM terminal identification information such as a VPI/VCI value, and an address, conveyed to a base station in a mobile station call-set up; *col. 7, line 12 thru col. 18, line 16*). Vialén et fail to clearly specify each customer station being assigned group identification information for identifying it as a member of a customer station group, and each base station having tables correlating the station-specific identifier information and the group identification information and containing the same group identification information for customer stations belonging to the same group.

In the same field of endeavor, Kumaki et al. disclose a router device connected to the Internet accommodating customer stations (mobile terminals), each customer station being assigned station-specific identification information for identifying the individual customer station (An IP address used as an identifier such as a terminal ID; col. 22, line 50-51) and group identification information for identifying it as a member of a customer station group (Corresponding input/output port ID information with VPI/VCI values for routing communications to a new site; *col. 57, line 33 thru col. 58, line 34*), and each base station having tables correlating the station-specific identifier information and the group identification information and containing the same group identification information for customer stations belonging to the same group (*col. 46, lines 57-60; col. 47, line 35 thru col. 49, line 20; col. 57, lines 36-56*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Vialén et al. system to include group identification information as taught by Kumaki et al. for the purpose of realizing real time communications when a mobile terminal is transitioning from one communication site to another.

Regarding **claim 5**, Vialén et al. disclose A subscriber wireless access system equipped with customer stations wirelessly connected to base stations (Mobile stations communicating in wireless fashion to the base stations; *col. 5, lines 9-11; Fig. 1*) and accommodating communication terminal devices in the customer stations (Accommodating communication terminal devices (network elements) such as base stations, ATM terminal devices, mobile telephone exchange in the mobile stations; *col. 5,*

*lines 23-26 and 53-60; Fig. 1*), the subscriber wireless access system comprising: at least one exchange for connecting the base stations with a virtual dedicated line network for enabling customer stations wirelessly connected to different base stations to be interconnected via a virtual dedicated line network (An ATM switch which enable permanent virtual connections therefore outlining a permanent virtual connection network, subsequently setting up permanent virtual connections between the mobile stations and the network elements; *col. 6, lines 1-34*), the exchange including a table correlating identification information assigned to the customer stations with virtual dedicated line network connection information allocated for connecting the customer stations (Wherein a management information base includes virtual path connection information, virtual channel connection, and address related the permanent virtual connections established for a mobile station call-set up establishment (VPI/VCI values); *col. 6, lines 50-58; col. 7, line 12 thru col. 8, line 16; Fig. 2; Fig. 4*); means responsive to receipt of data from a customer station via a subordinate base station for, with reference to the table, sending the data through the virtual dedicated line network to another base station (Receiving data from a mobile station via a serving base station, subsequently forwarding the data to the network through a permanent virtual connection in accordance with an address value corresponding to a new base station and associated with a VPI/VCI value, thus sending the data to the new base station; *col. 6, lines 1-29; col. 9, line 10 thru col. 10, line 55*); and means responsive to receipt of data through the virtual dedicated line network for, with reference to the table, converting the data to customer station identification information of a customer station and sending the data to a subordinate

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base station (A mobile station or ATM terminal identification information such as a VPI/VCI value, and an address, conveyed to a base station in a mobile station call-set up; *col. 7, line 12 thru col. 18, line 16*). Vialén et al. fail to clearly specify each customer station being assigned group identification information for identifying it as a member of a customer station group, and each base station having tables correlating the station-specific identifier information and the group identification information and containing the same group identification information for customer stations belonging to the same group, and the tables of the base stations being management information bases and, by utilizing a simple network management protocol system, the group identification information being written to the management information bases using information sent from a management unit connected via the virtual dedicated line network

In the same field of endeavor, Kumaki et al. disclose a router device connected to the Internet accommodating customer stations (mobile terminals), each customer station being assigned station-specific identification information for identifying the individual customer station (An IP address used as an identifier such as a terminal ID; *col. 22, line 50-51*) and group identification information for identifying it as a member of a customer station group (Corresponding input/output port ID information with VPI/VCI values for routing communications to a new site; *col. 57, line 33 thru col. 58, line 34*), and each base station having tables correlating the station-specific identifier information and the group identification information and containing the same group identification information for customer stations belonging to the same group (*col. 46, lines 57-60; col. 47, line 35 thru col. 49, line 20; col. 57, lines 36-56*), and the tables of the base stations being

management information bases (MIB; *col. 16, lines 37-43*) and, by utilizing a simple network management protocol system (SNMP; *col. 17, lines 36-58*), the group identification information being written to the management information bases using information sent from a management unit connected via the virtual dedicated line network (Wherein in all the information is defined as MIB radio characteristic objects written into the tables; *col. 16, line 37 thru col. 17, line 58*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Vialén et al. system to include group identification information as taught by Kumaki et al. for the purpose of realizing real time communications when a mobile terminal is transitioning from one communication site to another.

Regarding **claims 7 and 9**, and as each applied respectively to claims 3 and 5, Vialén et al. in view of Lundh et al. disclose the aforementioned system. In addition Lundh et al. suggests wherein the information assigned to the mobile terminals are included in wireless frames of the base stations and the mobile terminals (*col. 6, line 50 thru col. 7, line 10*).

Furthermore in the same field of endeavor, Kumaki et al. a router device connected to the Internet accommodating customer stations, wherein information pertaining group and customer or mobile identification (IP address, VPI/VCI values, port number, etc.) are included on wireless frames from any node in the network (*col. 15, line 50 thru col. 16, line 16*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Vialén et al. in view of Lundh et al. system to include identification information in wireless frames as taught by Kumaki et al. for the purpose of comprising a header and secondary flag fields that contain corresponding identification values for routing.

8. **Claims 4 and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Vialén et al. (U.S. Pat. No. 6,606,310) in view of Lundh et al. (U.S. Pat. No. 6,373,384), further in view of Kumaki et al. (U.S. Pat. No. 6,473,411).

Regarding **claim 4**, Vialén et al. disclose a subscriber wireless access system equipped with customer stations wirelessly connected to base stations (Mobile stations communicating in wireless fashion to the base stations; *col. 5, lines 9-11; Fig. 1*) and accommodating communication terminal devices in the customer stations (Accommodating communication terminal devices (network elements) such as base stations, ATM terminal devices, mobile telephone exchange in the mobile stations; *col. 5, lines 23-26 and 53-60; Fig. 1*), the subscriber wireless access system comprising: exchanges for connecting the base stations with a virtual dedicated line network for enabling customer stations wirelessly connected to different base stations to be interconnected via a virtual dedicated line network (An ATM switch which enable permanent virtual connections therefore outlining a permanent virtual connection network, subsequently setting up permanent virtual connections between the mobile stations and the network elements; *col. 6, lines 1-34*), each exchange including a table



correlating identification information assigned to the customer stations with virtual dedicated line network connection information allocated for connecting the customer stations (Wherein a management information base includes virtual path connection information, virtual channel connection, and address related the permanent virtual connections established for a mobile station call-set up establishment (VPI/VCI values); *col. 6, lines 50-58; col. 7, line 12 thru col. 8, line 16; Fig. 2; Fig. 4*); means responsive to receipt of data from a customer station via a subordinate base station for, with reference to the table, sending the data through the virtual dedicated line network to another base station (Receiving data from a mobile station via a serving base station, subsequently forwarding the data to the network through a permanent virtual connection in accordance with an address value corresponding to a new base station and associated with a VPI/VCI value, thus sending the data to the new base station; *col. 6, lines 1-29; col. 9, line 10 thru col. 10, line 55*); and means responsive to receipt of data through the virtual dedicated line network for, with reference to the table, converting the data to customer station identification information of a customer station and sending the data to a subordinate base station (A mobile station or ATM terminal identification information such as a VPI/VCI value, and an address, conveyed to a base station in a mobile station call-set up; *col. 7, line 12 thru col. 18, line 16*), the tables of the exchanges containing identical virtual dedicated line network connection information for the customer stations connected through the virtual dedicated line network (the tables of the exchanges containing identical virtual dedicated line network connection information for the customer stations connected through the virtual dedicated line network (Wherein a management

information base includes virtual path connection information, virtual channel connection, and address related the permanent virtual connections established for a mobile station call-set up establishment (VPI/VCI values); *col. 6, lines 50-58; col. 7, line 12 thru col. 8, line 16; Fig. 2; Fig.4*). Vialén et al. fail to clearly specify an exchange being provided in every base station; each customer station being assigned group identification information for identifying it as a member of a customer station group, and each base station having tables correlating a station-specific identifier information and the group identification information and containing the same group identification information for customer stations belonging to the same group.

In the same field of endeavor, Lundh et al. disclose a cellular telecommunications network wherein an exchange being provided in every base station (Each base station comprising an ATM switch or exchange; *col. 6, line 34-36; Fig. 1, item 72*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Vialén et al. system to include an exchange or ATM switch in every base station as taught by Lundh et al. for the purpose of containing relevant frame information in every base station without relaying in a upper or master unit to convey the information to every base station.

Vialén et al. in view of Lundh et al. fail to clearly specify each customer station being assigned group identification information for identifying it as a member of a customer station group, and each base station having tables correlating a station-specific identifier information and the group identification information and containing the same group identification information for customer stations belonging to the same group.

In the same field of endeavor, Kumaki et al. disclose a router device connected to the Internet accommodating customer stations (mobile terminals), each customer station being assigned station-specific identification information for identifying the individual customer station (An IP address used as an identifier such as a terminal ID; col. 22, line 50-51) and group identification information for identifying it as a member of a customer station group (Corresponding input/output port ID information with VPI/VCI values for routing communications to a new site; *col. 57, line 33 thru col. 58, line 34*), and each base station having tables correlating the station-specific identifier information and the group identification information and containing the same group identification information for customer stations belonging to the same group (*col. 46, lines 57-60; col. 47, line 35 thru col. 49, line 20; col. 57, lines 36-56*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Vialén et al. in view of Lundh et al. system to include group identification information as taught by Kumaki et al. for the purpose of realizing real time communications when a mobile terminal is transitioning from one communication site to another.

Regarding **claim 6**, Vialén et al. disclose a subscriber wireless access system equipped with customer stations wirelessly connected to base stations (Mobile stations communicating in wireless fashion to the base stations; *col. 5, lines 9-11; Fig. 1*) and accommodating communication terminal devices in the customer stations (Accommodating communication terminal devices (network elements) such as base stations, ATM terminal devices, mobile telephone exchange in the mobile stations; *col. 5,*

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*lines 23-26 and 53-60; Fig. 1*), the subscriber wireless access system comprising: exchanges for connecting the base stations with a virtual dedicated line network for enabling customer stations wirelessly connected to different base stations to be interconnected via a virtual dedicated line network (An ATM switch which enable permanent virtual connections therefore outlining a permanent virtual connection network, subsequently setting up permanent virtual connections between the mobile stations and the network elements; *col. 6, lines 1-34*), each exchange including a table correlating identification information assigned to the customer stations with virtual dedicated line network connection information allocated for connecting the customer stations (Wherein a management information base includes virtual path connection information, virtual channel connection, and address related the permanent virtual connections established for a mobile station call-set up establishment (VPI/VCI values); *col. 6, lines 50-58; col. 7, line 12 thru col. 8, line 16; Fig. 2; Fig.4*); means responsive to receipt of data from a customer station via a subordinate base station for, with reference to the table, sending the data through the virtual dedicated line network to another base station (Receiving data from a mobile station via a serving base station, subsequently forwarding the data to the network through a permanent virtual connection in accordance with an address value corresponding to a new base station and associated with a VPI/VCI value, thus sending the data to the new base station; *col. 6, lines 1-29; col. 9, line 10 thru col. 10, line 55*); and means responsive to receipt of data through the virtual dedicated line network for, with reference to the table, converting the data to customer station identification information of a customer station and sending the data to a subordinate

base station (A mobile station or ATM terminal identification information such as a VPI/VCI value, and an address, conveyed to a base station in a mobile station call-set up; *col. 7, line 12 thru col. 18, line 16*), the tables of the exchanges containing identical virtual dedicated line network connection information for the customer stations connected through the virtual dedicated line network (the tables of the exchanges containing identical virtual dedicated line network connection information for the customer stations connected through the virtual dedicated line network (Wherein a management information base includes virtual path connection information, virtual channel connection, and address related the permanent virtual connections established for a mobile station call-set up establishment (VPI/VCI values); *col. 6, lines 50-58; col. 7, line 12 thru col. 8, line 16; Fig. 2; Fig.4*). Vialén et al. fail to clearly specify an exchange being provided in every base station; each customer station being assigned group identification information for identifying it as a member of a customer station group, each base station having tables correlating a station-specific identifier information and the group identification information and containing the same group identification information for customer stations belonging to the same group, and the tables of the base stations being management information bases and, by utilizing a simple network management protocol system, the group identification information being written to the management information bases using information sent from a management unit connected via the virtual dedicated line network.

In the same field of endeavor, Lundh et al. disclose a cellular telecommunications network wherein an exchange being provided in every base station (Each base station comprising an ATM switch or exchange; *col. 6, line 34-36; Fig. 1, item 72*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Vialén et al. system to include an exchange or ATM switch in every base station as taught by Lundh et al. for the purpose of containing relevant frame information in every base station without relaying in a upper or master unit to convey the information to every base station.

Vialén et al. in view of Lundh et al. fail to clearly specify each customer station being assigned group identification information for identifying it as a member of a customer station group, and each base station having tables correlating the station-specific identifier information and the group identification information and containing the same group identification information for customer stations belonging to the same group, and the tables of the base stations being management information bases and, by utilizing a simple network management protocol system, the group identification information being written to the management information bases using information sent from a management unit connected via the virtual dedicated line network.

In the same field of endeavor, Kumaki et al. disclose a router device connected to the Internet accommodating customer stations (mobile terminals), each customer station being assigned station-specific identification information for identifying the individual customer station (An IP address used as an identifier such as a terminal ID; *col. 22, line 50-51*) and group identification information for identifying it as a member of a customer

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station group (Corresponding input/output port ID information with VPI/VCI values for routing communications to a new site; *col. 57, line 33 thru col. 58, line 34*), and each base station having tables correlating the station-specific identifier information and the group identification information and containing the same group identification information for customer stations belonging to the same group (*col. 46, lines 57-60; col. 47, line 35 thru col. 49, line 20; col. 57, lines 36-56*), and the tables of the base stations being management information bases (MIB; *col. 16, lines 37-43*) and, by utilizing a simple network management protocol system (SNMP; *col. 17, lines 36-58*), the group identification information being written to the management information bases using information sent from a management unit connected via the virtual dedicated line network (Wherein in all the information is defined as MIB radio characteristic objects written into the tables; *col. 16, line 37 thru col. 17, line 58*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Vialén et al. in view of Lundh et al. system to include group identification information as taught by Kumaki et al. for the purpose of realizing real time communications when a mobile terminal is transitioning from one communication site to another.

Regarding **claims 8 and 10**, and as each applied respectively to claims 4 and 6, Vialén et al. in view of Lundh et al. disclose the aforementioned system. In addition Lundh et al. suggests wherein the information assigned to the mobile terminals are included in wireless frames of the base stations and the mobile terminals (*col. 6, line 50 thru col. 7, line 10*).

Furthermore in the same field of endeavor, Kumaki et al. a router device connected to the Internet accommodating customer stations, wherein information pertaining group and customer or mobile identification (IP address, VPI/VCI values, port number, etc.) are included on wireless frames from any node in the network (*col. 15, line 50 thru col. 16, line 16*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Vialén et al. in view of Lundh et al. system to include identification information in wireless frames as taught by Kumaki et al. for the purpose of comprising a header and secondary flag fields that contain corresponding identification values for routing.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Huang et al. (U.S. Pat. No. 6,041,358), Method for Maintaining Virtual Local Area Networks with Mobile Terminals in an ATM Network.
- b. Acharya et al. (U.S. Pat. No. 5,974,036), Handoff-Control Technique for Wireless ATM.
- c. Hara et al. (US006738812B1), MIB Integrative Management Method for an ATM Server.
- d. Wang et al. (U.S. Pat. No. 5,875,185), Seamless Handoff for a Wireless LAN/Wired LAN Internetworking.



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e. Noven (U.S. Pat. No. 5,809,501), Method and System of Database Management in an Asynchronous Transfer Mode (ATM) Environment.

10. Any response to this Office Action should be **faxed to** (703) 872-9306 or **mailed to**:

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11. Any inquiry concerning this communication on earlier communications from the Examiner should be directed to Ismael Quiñones whose telephone number is (703) 305-8997.

The Examiner can normally be reached on Monday-Friday from 8:00am to 5:00pm.

12. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379, and fax number is (703) 746-9818. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9301.

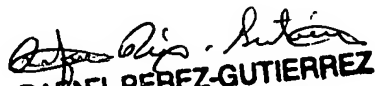
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose number is (703) 305-4700 or call customer service at (703) 306-0377.

*Ismael Quiñones*

I.Q.

July 16, 2004

  
RAFAEL PEREZ-GUTIERREZ  
PATENT EXAMINER  
7/21/04